**Appendix VI**. Teacher Notes on Acid/Base pH Calculation Demonstration

Prepare two 250mL solutions of HCl and two 250mL solutions of NaOH.

Solution 1: 0.1M HCl prepared by adding 25mL of stock 1.0M HCl to 225mL H2O

Solution 2: 0.0075M HCl prepared by adding 1.9mL of stock HCl to 248mL H2O

Solution 3: 0.09M NaOH prepared by adding 22.55mL of stock 1.0N NaOH to 225mL H2O

Solution 4: 0.005M NaOH prepared by adding 1.25mL of stock to 249mL H2O

Solution 1 should be pH = 1 Solution 3 should be pH = 12.9

Solution 2 should be pH = 2.1 Solution 4 should be pH = 11.7

**Appendix VII**

Determining pH of solution created when Solution 2 and 4 are mixed

Reaction: HCl(aq) + NaOH(aq) 🡪 NaCl(aq) + H2O(l)

Remainder should be 0.0025 HCl. pH = 2.6